



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/526,546

03/03/2005

Uwe Gorges

034193-016

5276

21839 7590 12/05/2008  
BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

EDWARDS, LAURA ESTELLE

ART UNIT

PAPER NUMBER

1792

NOTIFICATION DATE

DELIVERY MODE

12/05/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,546	<b>Applicant(s)</b> GORGES ET AL.
	<b>Examiner</b> Laura Edwards	<b>Art Unit</b> 1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-5, 8, 10-12, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lierke et al (US 4,981,425) in view of Bauckhage et al (US 5,164,198), Goldschmidt et al (DE 4328088), and Onishi (US 3,198,170) for reasons set forth in the previous office action.

With respect to new claim 17, a prima facie case of obviousness has been established against the use of two pipes in the vicinity of the maximum of the sound particle velocity such that it would be within the purview of one skilled in the art to provide for duplication of the first two pipes to include a second two pipes in line in the vicinity of the maximum of yet another sound particle velocity.

Claims 6, 7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lierke et al (US 4,981,425), Bauckhage et al (US 5,164,198), Goldschmidt et al (DE 4328088), and Onishi (US 3,198,170) as applied to claim 1 above, and further in view of Orme et al (US 5,259,593) for reasons set forth in the previous office action.

Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lierke et al (US 4,981,425), Bauckhage et al (US 5,164,198), Goldschmidt et al (DE 4328088), and Onishi (US 3,198,170) as applied to claim 1 above, and further in view of Pitchon et al (US 4,600,472) for reasons set forth in the final office action.

***Response to Arguments***

Applicants' arguments filed 7/23/08 have been fully considered but they are not persuasive.

Applicants contend that none of the patents to Lierke, Bauckhage, Goldschmidt, nor Onishi singly or in combination set forth a paint feeding device by which paint can be fed into the vicinity of a maximum of the sound particle velocity of an ultrasonic field, wherein the paint feeding device has in the region of the standing ultrasonic field at least two pieces of pipe for discharging paint, and wherein at least two of the pieces of pipe are arranged at one selected maximum of the sound particle velocity of the standing ultrasonic field, as required by claim 1.

This argument is well taken in that none of the patents to Lierke, Bauckhage, Goldschmidt nor Onishi explicitly teach two pipes in an arrangement wherein the two pipes are positioned exactly at the maximum of the sound particle velocity. However, in the instant rejection, the prior art has been combined to establish the obviousness of the placement of more than one pipe in the vicinity of the maximum of the sound particle velocity. Lierke, the primary reference, establishes at least one pipe in the vicinity/neighborhood of the maximum of the sound particle velocity but Bauckhage, as cited by Applicants as prior art, goes further to establish one pipe in such an arrangement can clearly be turned into two or more pipes in such an arrangement to maximize atomization/dispersion of the material over a large surface area thus turning to the use of more pipes to get more coating coverage in a sonotrode based atomizer arrangement. Ergo, patentability of the instantly claimed invention would be unwarranted merely because the instantly claimed invention recites using more than one pipe in the vicinity/neighborhood of the maximum sound particle velocity.

Art Unit: 1792

Applicants argue that the Examiner has not fully address claim 4 in that the rejecting prior art does not provide for the limitation of the paint outlet openings of the at least two pieces of pipe in the region of the selected maximum of the sound particle velocity of a standing ultrasonic wave are arranged on an imaginary straight line, wherein the straight line is perpendicular to an imaginary center line which passes through the centroids of opposing sound faces of the sonotrode and of the component. Bauckhage does not show this arrangement because in Fig. 5, the crucibles 10 are arranged parallel to the oscillating axis 24.

This argument is not deemed persuasive in that again Applicants seek patentability over the arrangement of the pipes in the region of the maximum of the sound particle velocity of a standing ultrasonic wave and in light of the combined prior art and it would appear that configuring the pipes as desired in the region of the maximum of the sound particle velocity of a standing ultrasonic wave would be within the purview of one skilled in the art.

With respect to new claim 17, Applicants argue that none of the cited prior art to Lierke, Bauckhage or Onishi, etc. set forth at least two pieces of pipe arranged at another one selected maximum of the sound particle velocity of the standing ultrasonic field as now claimed.

This argument is unconvincing to warrant a grant of patentability of claim 17 because if using two pipes in the vicinity of the maximum of the sound particle velocity is deemed obvious for reasons stated on record, it would be within the purview of one skilled in the art to provide for duplication of the first two pipes to include a second two pipes in line in the vicinity of the maximum of yet another sound particle velocity. One of ordinary skill in the art would expect that an increase in pipes would provide of an increase in output or dispersion/atomization of material.

Art Unit: 1792

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Edwards whose telephone number is (571) 272-1227. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1792

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura Edwards/  
Primary Examiner  
Art Unit 1792

le  
November 23, 2008